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EXAMINER

LIN, WEN TAI

ART UNIT PAPER NUMBER

2154

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/693,681

Applicant(s)

SAULPAUGH ET AL.

Examiner

Wen-Tai Lin

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 2/22/05.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-89 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-7, 13-16, 27-34, 40-43, 53-58, 62-64, 72-77 and 80-82 is/are rejected.  
7) ☒ Claim(s) 8-12, 17-26, 35-39, 44-52, 59-61, 65-71, 78, 79 and 83-88 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 19 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/24/05.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Claims 1-89 are presented for examination.
2. The text of those sections of Title 35, USC code not included in this action can be found in the prior Office Action.
3. Claims 3 is objected to because the term “the client gate” lacks antecedent basis.
4. Claims 16-21 are objected to because it is unclear whether the “client method gate” in claim 16 is equivalent to the “client message gate” of claim 1 or not. Note that though these gates are named differently, they are both the source of the “first message”. For the prior art rejection in this office action, the client method gate is construed to be the same as the client message gate.

### ***Claim Rejections - 35 USC § 102***

5. Claims 1-3, 6-7, 13-16, 27-28, 30-32, 34, 40-43, 53-54, 56-58, 62-64, 73-75, 77 and 80-82 are rejected under 35 U.S.C. 102(e) as being anticipated by Beall et al.[U.S. Pat. No. 6169992].

6. As to claim 1, Beall teaches the invention as claimed including: a method for accessing results data in a distributed computing environment [Abstract; Figs. 3-5; col.11, lines 7-32], comprising:

a client sending a first message in a data representation language [e.g., a RPC request in HTML *language*] to a service accessible through the distributed computing environment, wherein the client comprises a client message gate [e.g., 5123, Fig.5] and wherein said sending a first message comprises the client message gate sending the first message to the service [e.g., col.22, lines 41-44; note that by default the *plain text* in the RPC using HTTP protocol is written in HTML *language*];

the service generating first results in response to the first message [e.g., col.22., lines 44-53];

generating a first results gate [e.g., 5121, Fig.5; 4100-4105, Fig.4] configured to provide an interface to the first results through messages in the data representation language, wherein the first results gate is distinct from the client message gate [i.e., the Applet and the HTTP proxy server are different entities]; and

the client accessing the first results through the first results gate [col.22, lines 30-39].

7. As to claims 2-3 and 6, Beall further teaches that the client comprises a client process [e.g., a client application process invoked by the client computer's OS], wherein said sending a first message comprises:

the client message gate receiving from the client process a request for the service to perform a function on behalf of the client process; and the client message gate sending the first

message to the service in response to said receiving a request [col.23, lines 9-16], wherein said generating a first results gate is performed by a client gate and providing the first results gate to the client process as results of the function [4100-4105, Fig.4; e.g., the browser download the executable content client from the web server].

8. As to claim 7, Beall further teaches that the first message includes information requesting the service to perform a function [e.g., performing a database search in response to a client's request], and wherein said generating first results comprises: the service performing the function; and generating the first results as output of said performing the function [col.3, lines 22-30].

9. As to claim 13, Beall further teaches that the first message includes information representing a computer programming language method call [i.e., RPC itself is a computer programming language method call], wherein the service [e.g., 5128, Fig.5] comprises one or more computer programming language methods executable within the service, and wherein one of the methods executable within the service corresponds to the method call included in the first message [col.18, lines 30-50].

10. As to claim 14, Beall teaches that the method further comprises:

a client process [e.g., any applet created in the Java runtime environment 4014, Fig.3] executing within the client generating the method call [col.,18, lines 47-51; wherein RPC is a method call];

wherein said sending a first message, said generating first results, and said generating a first results gate are performed without client process intervention [col.11, lines 7-15; i.e., the executable content client is downloaded by the browser prior creation of the applets].

11. As to claims 27-28, Beall further teaches that the client is executing within a virtual machine, wherein the virtual machine is executing within a client device in the distributed computing environment, and wherein the virtual machine is a Java Virtual Machine (JVM) [col.11, lines 7-12].

12. As to claim 56, Beall teaches the invention as claimed including: a device comprising: a first gate unit [e.g., the browser of Figs. 3-5] configured to:

send a first message in a data representation language to a service accessible through a distributed computing environment, wherein the service is operable to generate first results in response to the first message;

generate a first results gate [e.g., 4016 of Fig.4 or 5121 of Fig.5], wherein the first results gate is configured to provide an interface to the first results through messages in the data representation language [e.g., HTML is a default data representation language used with the conventional HTTP protocol]; and

a client component configured to access the first results through the first results gate [col.10, line 58 ;V col.11, line 32].

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13. As to claims 15-16, 30-32, 34, 40-43, 53-54, 57-58, 62-64, 73-75, 77 and 80-82, since the features of these claims can also be found in claims 1-3, 7, 13-14, 27-28 and 56, they are rejected for the same reasons set forth in the rejection of claims 1-3, 7, 13-14, 27-28 and 56 above.

***Claim Rejections - 35 USC § 103***

14. Claims 4-5, 33 and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beall et al.(hereafter "Beall") [U.S. Pat. No. 6169992], as applied to claims 1-3, 6-7, 13-16, 27-28, 30-32, 34, 40-43, 53-54, 56-58, 62-64, 73-75, 77 and 80-82 above, further in view of Kingdon [U.S. Pat. No. 5349642].

15. As to claims 4-5, Beall does not specifically teach the method further uses the client gate or the first results gate to attach an authentication credential to the first message prior to said sending the first message, wherein the authentication credential identifies the client.

However, in the same field of endeavor, Kingdon teaches a method for providing message packet authentication to prevent the forging of message packets [Kingdon: Abstract: lines 1-3; col.3, line 66 ;V col.4, line 22].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have adopted Kingdon's message packet authentication process in Beall's system because (1) Beall's system also requires some sort of authentication in particular for requesting a subscribed service; (2) Kingdon's message packet authentication process could reduce the number of authentication related messages passing back and forth between the server and the

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client [see col.3, lines 31-36 for motivation]; and (3) in a distributed service environment Beall's client does not know which server would provide the service until this issue got resolved at the client gate or the first result gate (which is generated by the client gate), therefore it is proper to attach authentication credential after the client gate or the first result gate has chosen the service providing server.

16. As to claims 33 and 76, since the features of these claims can also be found in claims 1-2, 4, 30-31 and 73-74, they are rejected for the same reasons set forth in the rejection of claims 1-2, 4, 30-31 and 73-74 above.

17. Claims 29, 55, 72 and 89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beall et al.(hereafter "Beall") [U.S. Pat. No. 6169992], as applied to claims 1-7, 13-16, 27-28, 30-34, 40-43, 53-54, 56-58, 62-64, 73-77 and 80-82 above, further in view of Bergman et al.(hereafter "Bergman") [U.S. Pat. No. 6564263].

18. As to claim 29, Beall does not specifically teach that the data representation language is eXtensible Markup Language (XML).

19. However, Bergman teaches that using XML language is portable and essentially independent of the underlying machine, operating system/platform, and programming languages etc. and therefore is ideal for representing sophisticated, hierarchical structured data [col.14, lines 3-28].



It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used XML as a data representation language for Beall's HTML because XML is more flexible on presenting database schema etc.

20. As to claims 55, 72 and 89, since the features of these claims can also be found in claims 1, 29-30, 56 and 73, they are rejected for the same reasons set forth in the rejection of claims 1, 29-30, 56 and 73 above.

21. Claims 8-12, 17-26, 35-39, 44-52, 59-61, 65-71, 78-79 and 83-88 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

22. Applicant's arguments with respect to claims 1-89 on 2/22/2005 have been considered but are moot in view of the new ground(s) of rejection.

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

24. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Conclusion***

**Examiner note:** Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the contest of the passage as taught by the prior art or disclosed by the Examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Tai Lin whose telephone number is (571)272-3969. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571)272-3964. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

(703)872-9306 for official communications; and

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(571)273-3969 for status inquires draft communication.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wen-Tai Lin

April 22, 2005

Wen-Tai Lin  
4/22/05

10a  
Figure 10 is an illustration of client and service gates as messaging endpoints in a distributed computing model according to one embodiment;

WTR  
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Figure 10b is an illustration a message endpoint generation according to a schema  
5 for accessing a service according to one embodiment.

Figure 11a illustrates gate creation in a distributed computing environment according to one embodiment;

10 Figure 11b illustrates gate creation and gate pairs in a distributed computing environment according to one embodiment;

Figure 12 is an illustration of possible gate components in a distributed computing environment according to one embodiment;

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Figure 13 is an illustration of proxy client for a conventional browser to participate in the distributed computing environment according to one embodiment;

Figure 14 illustrates the use of a method gate to provide a remote method invocation interface to a service in a distributed computing environment according to one embodiment;

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Figure 15 is an illustration of the use of a space in a distributed computing environment according to one embodiment;

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Figure 16 illustrates advertisement structure according to one embodiment;

Figure 17 illustrates one example of advertisement state transitions that an advertisement may undergo during its lifetime according to one embodiment;

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